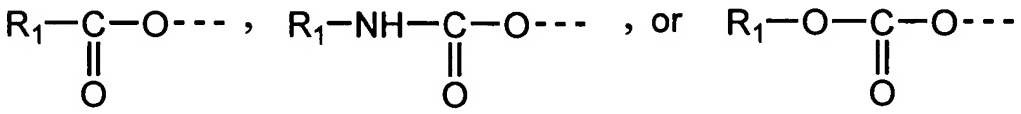
CLAIMS

1. A positive working imageable element comprising:

a substrate;

a first layer disposed on a portion of the substrate comprising a polymeric material; and

a second layer disposed on the first comprising a hydroxyl group-containing polymer that includes a heat-labile moiety represented by the formula:



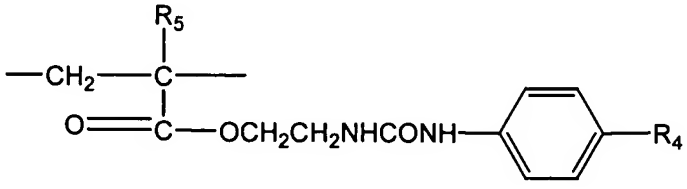
wherein R_1 is an alkyl group, an arylalkyl group, an aryl group, an alkenyl group or a silyl group.

2. The element of claim 1, wherein the substrate comprises aluminum.

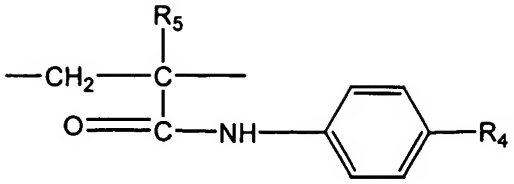
3. The element of claim 1, wherein the substrate comprises grained aluminum, anodized aluminum, or grained and anodized aluminum.

4. The element of claim 1, wherein the first layer comprises a copolymer including units of N-phenylmaleimide, methacrylic acid or methacrylamide.

5. The element of claim 1, wherein the first layer comprises a copolymer including units of N-phenylmaleimide, methacrylamide, acrylonitrile, and a moiety represented by the formula:



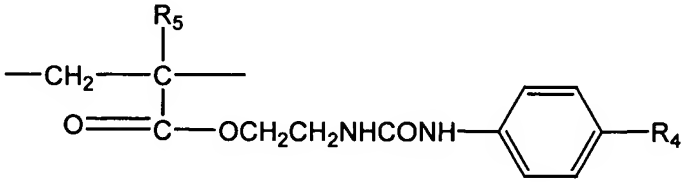
or



or units of both moieties;

and wherein R_4 is OH, COOH, or SO_2NH_2, and R_5 is hydrogen, halogen or a C_1-C_{12} alkyl group.

6. The element of claim 1, wherein the first layer comprises a first copolymer including units of N-phenylmaleimide, methacrylamide and methacrylic acid, and a second copolymer including units of N-phenylmaleimide, methacrylamide, acrylonitrile and a moiety represented by the formula:



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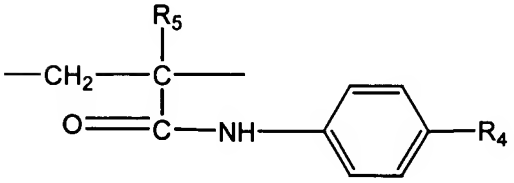


or units of both moieties,

and wherein R_4 is OH, COOH, or SO_2NH_2, and R_5 is hydrogen, halogen or a C_1-C_{12} alkyl group.

7. The element of claim 1, wherein the first layer comprises a resin having activated methylol or activated alkylated methylol groups.

8. The element of claim 7, wherein the resin comprises a resole resin.

9. The element of claim 1, wherein the first layer comprises a radiation absorbing compound.

10. The element of claim 9, wherein the radiation absorbing compound is an infrared radiation absorbing material.

11. The element of claim 10, wherein the infrared radiation absorbing compound is a dye or a pigment.

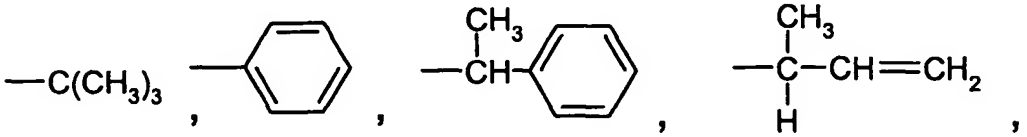
12. The element of claim 1, wherein the second layer comprises a radiation absorbing compound.

13. The element of claim 1, wherein the hydroxyl group-containing polymer is a phenolic resin or a copolymer or derivative thereof.

14. The element of claim 1, wherein the hydroxyl group-containing polymer is a novolak resin.

15. The element of claim 1, wherein the heat-labile moiety comprises a pendant group on the hydroxyl group-containing polymer.

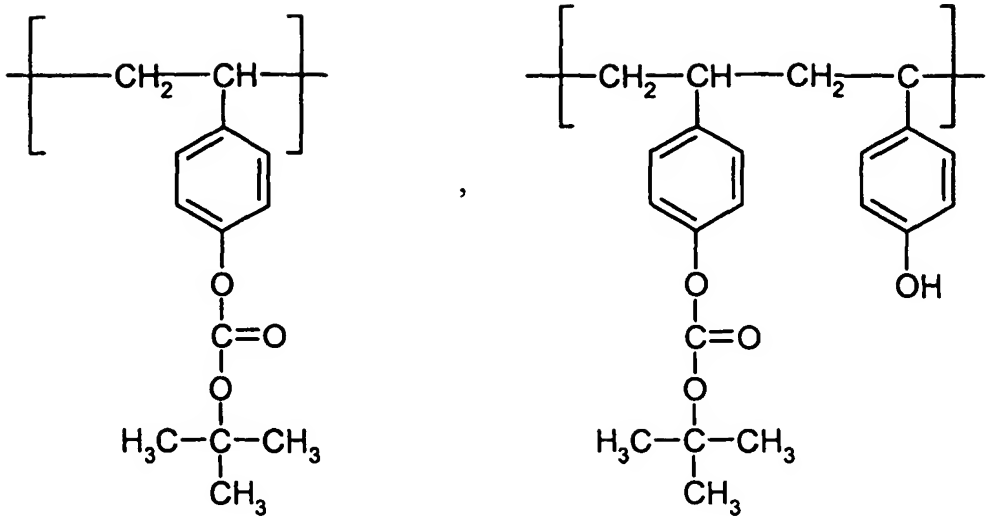
16. The element of claim 1, wherein R_1 comprises:



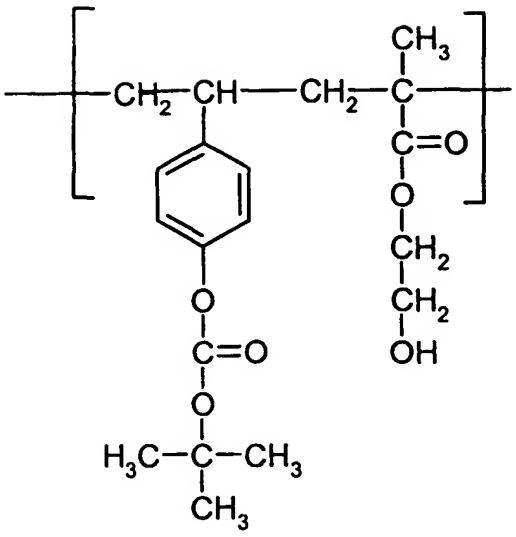
or —Si(CH3)3

17. The element of claim 1, wherein R_1 is $C(CH_3)_3$.

18. The element of claim 1, wherein the hydroxyl group-containing polymer comprises units of:



or



19. The element of claim 1, wherein the hydroxyl group-containing polymer includes 5 mol% to 50 mol% of the heat-labile moiety.

20. The element of claim 1, wherein the hydroxyl group-containing polymer includes 10 mol% to 30 mol% of the heat-labile moiety.

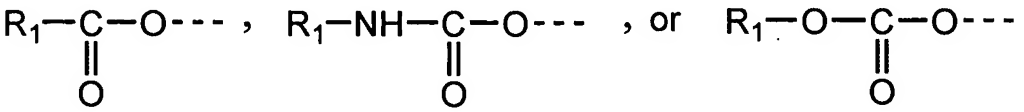
21. The element of claim 1, wherein the imageable element comprises a printing plate precursor, an electronic part precursor or a mask precursor.

22. A method of forming a printing plate precursor comprising:

providing a substrate;

applying onto the substrate a first layer comprising a polymeric material and a radiation absorbing compound; and

applying onto the first layer a second layer that comprises a hydroxyl group-containing polymer that includes a heat-labile moiety having the formula:



wherein R_1 is an alkyl group, an arylalkyl group, an aryl group, an alkenyl group or a silyl group.

23. The method of claim 22, further comprising:

imagewise exposing the precursor to radiation such that exposed portions of the second layer are more developable in an alkaline developer liquid than unexposed portions; and

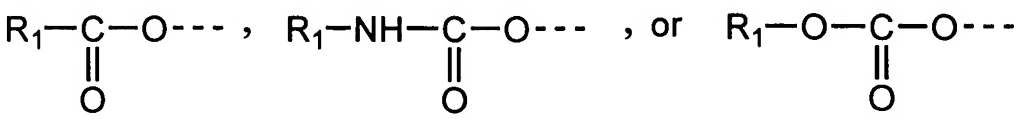
developing the precursor to form an image.

24. A positive working imageable element comprising:

a substrate;

a first layer disposed on a portion of the substrate comprising a polymeric material and a radiation absorbing compound; and

a second layer disposed on the first layer that is substantially free of the radiation absorbing compound and comprising a hydroxyl group-containing polymer that includes a heat-labile moiety represented by the formula:



wherein R_1 is an alkyl group, an arylalkyl group, an aryl group, an alkenyl group or a silyl group.